

**REMARKS**

Claims 25-29 are pending in the application. The Examiner has raised the following rejections:

I. Claims 25-29 are rejected under 35 U.S.C. §112, second paragraph as being indefinite for allegedly failing to particularly point out and distinctly claim the subject matter that the applicant regards as the invention; and

II. Claims 25-29 are rejected under 35 U.S.C. §103(a) as allegedly being unpatentable over Cleary, *et al.*, (“Cleary”) in view of Levy, *et al.*, (“Levy”) and Embleton, *et al.* (“Embleton”).

Applicant respectfully requests reconsideration of the application in view of the amendments and comments provided herein. The rejections will be addressed in the order listed above.

**I. The Claims are not indefinite.**

The Examiner has rejected Claims 25-29 under 35 U.S.C. §112, second paragraph, as allegedly failing to particularly point out and distinctly claim the subject matter that the applicant regards as the invention (Office Action, page 3). In particular, the Examiner asserts that it is not clear from the claims how the identification of a cell or clone produces the claimed multivalent composition. Applicant respectfully disagrees. Nonetheless, for business reasons and without acquiescing to the Examiner’s arguments, and reserving the right to prosecute the original or similar claims in the future, Applicant has herein amended Claims 25, 28 and 29 to recite a cell (or clone, as in Claim 29) expressing the multivalent composition.

The claims as amended clearly state that the cells or clones expressing the multivalent composition comprises the recited combinations of V<sub>H</sub> and V<sub>L</sub> regions (*i.e.*, at least one V<sub>H</sub> region and at least two V<sub>L</sub> regions, at least two V<sub>H</sub> regions and at least one V<sub>L</sub> region, and at least two V<sub>H</sub> regions and at least two V<sub>L</sub> regions, wherein said at least

two V<sub>L</sub> regions differ by at least one idiotope, wherein said at least two V<sub>H</sub> regions differ by at least one idiotope). Thus, the claims to an individual cells or clones expressing the combination of variant variable regions do not read on *multiplicities* of cells expressing a combination of antibodies, nor do they read on compositions assembled by combining a multiplicity of whole antibodies or fragment antibodies.

In the Advisory Action mailed on May 5, 2006, the Examiner asserts that the specification lacks support for a multivalent composition being a cell capable of growth in said second aqueous solution. Applicant respectfully disagrees. However, without acquiescing to the Examiner's arguments, and reserving the right to prosecute such claims in the future, Applicant herein amends the claims to recite a cell (or clone, as in Claim 29) expressing the multivalent composition. Support for this amendment is found throughout the specification, including, for example, in Example 10, starting on page 88 at line 16, which describes the production of multivalent compositions of idiotypic proteins by the production of cells that express the multivalent compositions.

For the reasons recited above, Applicant submits that Claims 25-29 as amended are not indefinite under 35 U.S.C. §112, and respectfully requests that this rejection be removed.

## **II. The Claims are Not Obvious**

The Examiner has rejected Claims 25-29 under 35 U.S.C. §103(a) as allegedly being unpatentable over Cleary, *et al.*, ("Cleary") in view of Levy, *et al.*, ("Levy") and Embleton, *et al.* ("Embleton").

For reasons stated in the Amendment and Response filed on August 19, 2005, and incorporated here by reference, Applicant maintains that these references are improperly combined. Nonetheless, for business reasons and without acquiescing to the Examiner's arguments, and reserving the right to prosecute the original claims in one or more future applications, the claims have been amended to recite a cell or clone that expresses a combination of V<sub>H</sub> and V<sub>L</sub> regions selected from the group consisting of at least one V<sub>H</sub> region and at least two V<sub>L</sub> regions, at least two V<sub>H</sub> regions and at least one V<sub>L</sub> region, and at least two V<sub>H</sub> regions and at least two V<sub>L</sub> regions, wherein said at least two V<sub>L</sub> regions

differ by at least one idiotope, wherein said at least two V<sub>H</sub> regions differ by at least one idiotope.

As the Examiner has noted (Office Action, page 3), neither the Cleary nor the Levy reference teach multivalent compositions comprising variant V<sub>H</sub> sequences comprising more than one idiotype, or variant V<sub>L</sub> sequences comprising more than one idiotype. Neither of these references teaches or suggests individual transformed cells or individual clones that express such combinations of variant V<sub>H</sub> and/or V<sub>L</sub> sequences, as recited by the present claims.

Embleton does not cure this deficiency. Rather, the teachings of Embleton specifically teach away from the claimed compositions. Embleton teaches methods particularly directed at amplifying immunoglobulin genes from within *single* cells, so as to avoid mixtures comprising the DNA of mixed populations of cells.


In contrast, present invention recites cells and clones constructed using just such a mixture of DNA, from a mixed population of cells. The present invention claims cells expressing multivalent compositions from DNA derived from multiple cells. The teachings of Embleton, which are directed at amplifying DNA from a single cell, are specifically contrary to production steps recited in the claims, and *will not produce the claimed composition*. Therefore, even if Embleton is combined with the Cleary and Levy references, the combination does not teach or suggest all of the elements of the present claims.

For the reasons described above, Applicant submits that the combination of Cleary, Levy, and Embleton does not establish obviousness of the instant claims and respectfully requests that this rejection be removed.

**CONCLUSION**

For the reasons set forth above, it is respectfully submitted that all reasons for rejection should be removed and Applicant's claims should be passed to allowance. Should the Examiner believe that a telephone interview would aid in the prosecution of this application, Applicant encourages the Examiner to call the undersigned collect at (608) 218-6900.

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